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AUTHOR Gaudet, Irby J., Jr.; Hotard, Stephen R.
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ABSTRACT

Post high school occupational level and job success were correlated with variables such as sex, race, school achievement, further educational training, and parental educational-occupational levels for 265 urban slow learners (IQ range 70-90) who graduated in either 1969 or 1972. Data on academic achievement demographic factors and students' interests were obtained from school cumulative records and were supplemented by occupational information obtained during personal interviews with Ss. Results indicated that slow learners were able to obtain employment (although occupational levels and earning capacity were limited); that more males, whites, and higher IQ slow learners found jobs immediately after high school graduation; that academic achievement, school interests, and pregraduation vocational interests were not long term predictors of employment success or occupational level; and that parents' educational levels and fathers' occupational levels were directly related to the employment success and occupational levels of slow learning high school graduates. (Also included are appendixes containing general and race-sex summary data on Ss, ratings of career and educational plans, an employment pattern survey, and an occupational level rating scale). (LH)

Final Report

Project No. 2F060
Contract No. OEC-6-72-0736-(509)

Irby J. Gaudet, Jr., Ph.D.
Stephen R. Hotard, Ph.D.
University of Southwestern Louisiana
P.O. Box 3131, U.S.L. Station
Lafayette, Louisiana 70501

POST EDUCATIONAL EMPLOYMENT PATTERNS OF THE SLOW LEARNER

August 15, 1973

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Office of Education

National Center for Educational Research and Development
(Regional Research Program)

Abstract

Slow learner graduates from a small urban community were studied in order to pinpoint the relationships of occupational level and job success with variables such as sex, race, degree of achievement in school, further educational training, and educational and occupational level of parents. Information from school cumulative records concerning academic achievement, interests and other demographic data were supplemented by personal interviews to obtain occupational information. Students from the classes of 1972 and 1969 provided information concerning immediate and longer term employment patterns. The results indicated that over a period of time after high school graduation, slow learners are able to obtain employment, although occupational level and earning capacity are limited. Males, Whites, and higher IQ slow learners were found to have greater chances of obtaining employment immediately after high school. Academic achievement, vocational interests and school interests were not long term predictors of employment success or level of occupation. Educational level of parents and occupational level of the father have definite bearings on the short term and long term employment success and occupational level of slow learner high school graduates.

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Irby J. Gaudet, Jr., Ph.D.
Stephen R. Hotard, Ph.D.

University of Southwestern Louisiana

Lafayette, Louisiana 70501

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

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POST EDUCATIONAL EMPLOYMENT PATTERNS OF THE SLOW LEARNER

Chapter 1 Introduction

Much literature is available on innovative teaching techniques and methodologies for educating the slow learner both at the grammar school and high school level (e.g. Crowley, 1969; Edwards, 1961; Greenholz, 1968; Hammitt, 1967; Pate, 1965). These new techniques are considered necessary to demonstrate to the slow learner students the relevance of academics to everyday living and to prepare them for the job market in a technological society. While this type of research continues to increase, there is a lack of attempts at correlating the curriculum and teaching methods utilized with post high school occupational level and difficulties encountered in finding a job.

Many research studies reflect the problems of finding jobs for school dropouts in major urban areas. Sheppard and Belitsky (1966) stated that the school dropout may become committed to the labor force before he is eligible for most career jobs. He is forced to compete with better educated, older youths. Sheppard and Belitsky concluded that the dropout must age before he has access to better jobs. Three years earlier, Perrella and Bogen (1963) indicated that 70 percent of dropouts and 75 percent of high school graduates were able to find jobs within five weeks of seeking employment, although occupational status was limited. Folk (1968), however, agreed with Sheppard and Belitsky (1966) that one of the critical variables in career employment is age. He found rising unemployment concentrated in younger teenagers and non-Whites. Young workers were found mostly in occupations and industries where advancement possibilities were limited. Leshner and Snyderman (1966) indicated that there was a lack of specific career aspirations in disadvantaged youth. Forty-six percent of the subjects interviewed did not have any job preference; 68 percent of the subjects with job preference could not state a second occupational choice. The above studies by no means exhaust the available literature on job placement problems of the high school dropout, but serve to indicate certain trends which may also apply to slow learners.

A perusal of ERIC and Psychological Abstracts revealed only one study that investigated job success of slow learners. Benjamin (1968) studied average-above average students, slow learners, and educable mentally handicapped students in work study programs in New York. He found that the three groups differed in ratings of jobs held. The average-above average group was superior to the slow learner group and the educable mentally handicapped group in proportion of total time employed, earning power, and ease of obtaining employment. He found that the three groups had similar strengths and weaknesses on items directly and indirectly related to curriculum, attitudes, and interests.

There is a paucity of research on employment placement of the slow learner who completes high school in small urban areas with industry in transition or diminution. It is necessary to examine employment conditions in this type of area so that contemporary information may be available for slow learner training innovations. It is imperative that such descriptive information be obtained so that productive innovative programs

may be designed for the specific needs of the students and the area in which they will seek employment.

In the Lafayette Parish (County) school system, there are five four-year high schools with a total enrollment of 7,647. The Parish Director of Student Personnel Services states that 10-15% of these students comprise the slow learner category, i.e., students with a measured IQ in the range 70-90 who are performing below grade level expectations. Depending on the number of students who drop out of school prior to graduation, a graduating class may contain 130-180 slow learners who will not go to college, but who must immediately find their place in the job market, attend trade school, or join the military.

The city of Lafayette, Louisiana, has a population of 53,059 Whites and 15,849 Blacks (1970 census). Including the city population, the parish (county) area consists of 83,384 Whites and 26,332 Blacks (1970 census). One industry is the major source of employment for the entire area other than the typical community service businesses and shops.

Because of the problems attendant to desegregation and the socio-economic and educational deprivation evolving from the prior segregated system, a disproportional number of black students are classified as slow learners in school. The subsequent difficulties in performing satisfactorily on employment screening devices may further delimit job opportunities. The problem may be further compounded by job discrimination against Blacks in general and especially against slow learner Blacks (Folk, 1968). Although innovative teaching methods are being devised to qualify the current slow learners in the job market, there may be some question as to what will happen to these students in terms of finding, keeping, and being satisfied with jobs after they finish school.

Purpose of the Study

This study was conducted on slow learners in the vicinity of Lafayette, Louisiana, in order to pinpoint the relationship of job success and occupational level with such variables as race, sex, IQ, and degree of achievement in school.

Slow learners who should have graduated in 1972 provided information on post-educational first year employment variables. The slow learner graduates of the class of 1969 provided information about their three year employment history. The results of this study provided information which may be beneficial to any proposed or ongoing slow learner program.

Chapter 2 Method

Subjects

"Slow learner" was defined as a student with an IQ in the range 70-90 and functioning below grade level on one or more academic subjects.

All subjects were enrolled in the Lafayette, Louisiana, Parish School System and were scheduled to graduate from high school in either 1969 or 1972. The description of subjects will be in two parts based on year of graduation.

1969 high school graduates. Ninety-one students were successfully contacted from the 1969 graduating class. The criteria for inclusion in the study were that the student was classified as a slow learner and that he could be located for an interview three years after high school graduation. Relatively complete school records were available on 194 slow learners, but due to lack of cooperation and changes of phone numbers and addresses, the final sample included only 47% of the original 1969 population. Due to the inadequate available sample, it was impossible to include any data from school dropouts who should have graduated in 1969. This was due to inaccurate and incomplete school records.

The 91 students studied included 25 Black females, 28 White females, 18 Black males, and 20 White males. Table 1 gives a breakdown for the above four groups in terms of IQ range. Other descriptive data is indicated in Appendix A.

Table 1

IQ Range For 1969 Students

	IQ 70-79		IQ 80-90	
	Males	Females	Males	Females
Blacks	9	17	9	8
Whites	6	6	14	22
Total	15	23	23	30

1972 high school graduates. One hundred seventy-four students were successfully contacted from the 1972 graduating class. The criteria for inclusion in the study were the same as for the 1969 graduates except that interviews were attempted three months after the 1972 graduation. Relatively complete school records were available on 243 slow learners, but due to the inaccessibility of the dropouts and lack of cooperation or address changes on the part of the graduates, the final sample included only 70% of the original 1972 population.

The 174 students studied included 48 Black females, 50 White females, 25 Black males, and 51 White males. Table 2 is a breakdown of the above four groups in terms of IQ ranges. Other descriptive data is indicated in Appendix B.

Table 2

IQ Range For 1972 Students

	IQ 70-79		IQ 80-90	
	Males	Females	Males	Females
Blacks	12	16	13	32
Whites	14	25	37	35
Total	26	31	50	67

Apparatus

School records were used to obtain the following information:

1. School cumulative records
   a. educational and occupational level of parents
   b. educational facilities in the home
   c. number of extracurricular activities
   d. sex
   e. race

2. Educational Development Series Profile (STS-EDS)
   a. IQ scores
   b. career plans (rated in Appendix C)
   c. educational plans (rated in Appendix D)
   d. school interests
   e. individual abilities, achievements, and skills in academic subjects

3. Kuder Interest Inventory

4. Science Research Associates Achievement Test (SRA). This test was given to 1969 graduates when they were in the eighth grade.

A questionnaire was designed for use in individual interviews (Appendix E).

The interview encompassed the following areas:

1. Job information
   a. working or not working
   b. type of job
   c. difficulty in finding a job
   d. job satisfaction

2. Other factors
   a. rapport
   b. check on veracity of school cumulative record
   c. current educational pursuit

Procedure

Records of all potential subjects were screened for completeness by the investigators and four student assistants. Records deficient in terms of addresses, phone numbers, IQ scores, and achievement test scores were excluded. Relatively complete information was recorded for 194 potential 1969 graduates and 243 potential 1972 graduates.

The 1969 graduates were interviewed in July and August of 1972, over three years after they were scheduled to graduate from high school. The 1972 students were interviewed in September and October of 1972, approximately three months after they should have graduated from high school. Interviews were conducted on an individual basis by a student assistant of the same race as the subject in order to maximize rapport. Interview data were recorded on the questionniare sheet (Appendix E).

Occupational Level. The Dictionary of Occupational Titles (1965) was used in order to find a rationale to rate the status of a particular occupation. Since the scaling in the above compendium is basically nominal, two counseling psychologists were consulted in order to evolve an ordinal scale for the employment categories representative of the subjects of this study. The final scale is presented in Appendix F. In ranking a specific occupation, emphasis was placed on level of education required to perform the specific task adequately. Consideration was also given to the status and relative salary of the job in this geographical area.

The Occupational Level rating scale was necessary in order to make comparisons across students and between students and parents on their respective levels of employment.

Chapter III Results

The results for the 1969 and 1972 students were analyzed separately. The 1969 data reflect employment patterns three years after graduation. The 1972 data reflect more immediate post-high school employment levels.

1969 slow learner data

General descriptive data. Means and standard deviations of all variables statistically analyzed for the 1969 students are presented in Appendix A. 67% of the students were actually employed during this study either full or part-time. Adjusting for the fact that some female subjects were married housewives who had been gainfully employed prior to their marriage, 89% of the subjects were considered employed. Only two students had never been employed. The average occupational level was in the lower fiftieth percentile of the available ratings albeit the large variability indicated by the standard deviation illustrates the fact that the 1969 slow learner is found in many different employment levels from management to domestic settings.

The mean education level of the students' parents was less than a high school education ($\bar{X}$ father=6.69 years; $\bar{X}$ mother=7.94 years) although there was substantial variability in the educational attainment of the parents. The average occupational level of the fathers was generally below that of skilled craftsman. As a group, mothers had a lower occupational level since the majority of them were housewives and were not considered gainfully employed.

School records indicated the availability of some educational facilities in all homes (eg, books, newspapers, magazines, televisions, "quietroom"). The veracity of the school records was substantiated by the reports of the interviewers. The average number of extracurricular activities was 1.7. This seems to indicate that the typical slow learner does not become very involved in ancillary school experiences.

The Kuder Interest Inventory taken in the eighth grade yielded extremely variable data. It will be shown later that the Kuder had limited differential predictability of post-high school employment status.

All 1969 students had been examined in the eighth grade with the SRA Achievement Test. The mean reading score for slow learners was 2.24 years below grade level. The mean math score was 1.11 years below grade level. The mean language arts score was .27 years below grade level.

During the fifth month of grade 12, the 1969 students were administered the STS-EDS. The mean reading score was 1.1 years below grade level. The mean math score was 1.6 years below grade level. The mean English score was .9 years below grade level. School interest scores indicated that the 1969 slow learners were most interested in vocational subjects and least interested in sciences. The mean coded future school plans score was three which indicated that the average educational ambition was to attend trade school.

In order to assess academic growth from eighth to twelfth grade, the eighth grade SRA reading, math, and language arts scores were subtracted from the appropriate scores on the STS-EDS. The mean increments were: reading=5.42 years; math=3.90 years; English=3.74 years. One must bear in mind that two different tests were used. The reading gain seems somewhat suspect and may be in part an artifact of differential standardization of the two achievement tests.

The majority of the 1969 students did not indicate any difficulties in finding employment. Those students who had difficulties frequently cited their lack of training and the general lack of job openings as the major obstacles. Thirty percent of the students indicated that they had attended trade school in order to obtain meaningful employment.

Sex, race, IQ, and occupational level were cross tabulated with relevant variables so that any relationships or differences might be described.

Sex differences. Males indicated higher career aspirations than did females (X^2=16.58, df=4, $p < .01$). This reflected the fact that males displayed interests in trades and skilled crafts while females preferred clerical and service occupations. Even though career aspirations differed, there were no significant sex differences in desire for further schooling after high school.

At the time of this study, males actually had better jobs than females (X^2=34.93, df=1, $p < .001$). This finding is due to the fact that some females were housewives, and could not be considered as gainfully employed. When the data were adjusted to take into consideration female pre-marital level of occupation, no significant sex differences were found. This means that both male and female slow learners could obtain gainful employment at comparable levels.

Males and females did not differ on eighth grade achievement tests in reading and arithmetic skills. However, females surpassed males on language arts skills (X^2=9.08, df=1, $p < .01$). On twelfth grade achievement tests, females scored higher than males in reading (X^2=7.43, df=1, $p < .01$); math (X^2=4.61, df=1, $p < .05$); and English (X^2=9.55, df=1, $p < .01$). Females posted larger gains than males on achievement test score changes from eighth grade to twelfth grade in reading (X^2=12.69, df=1, $p < .001$); math (X^2=4.27, df=1, $p < .05$); and English (X^2=5.33, df=1, $p < .05$).

While differences were evident for academic subjects, males and females did not differ in IQ. No differences were found between males and females on the scales of the Kuder Interest Inventory or on the school interest scales of the STS-EDS. The sexes also did not differ significantly in number of extracurricular activities.

Race differences. There were no significant differences between Blacks and Whites on level of career aspirations albeit Blacks did aspire to more future schooling than did Whites (X^2=4.78, df=1, $p < .05$). In terms of attained additional schooling (trade school or college), Blacks and Whites did not differ.

At the time of this study, there were no significant differences in the proportions of Blacks and Whites who were or were not employed, nor were there any race differences in occupational level. However, when

adjusting occupational levels to reflect female premarital employment status, Whites had better jobs than Blacks (X^2=7.77, df=1, $p < .01$). Fathers of white students had better jobs than fathers of black students (X^2=5.28, df=1, $p < .05$). Fathers of white students had attained higher educational levels than fathers of black students (X^2=13.47, df=1, $p < .001$). Mothers of white students also surpassed mothers of black students in years of education (X^2=18.39, df=1, $p < .001$).

On eighth grade achievement tests, Whites were superior to Blacks on reading (X^2=4.52, df=1, $p < .05$), and language arts (X^2=6.68, df=1, $p < .01$), however, there were no race differences on math scores. On twelfth grade achievement tests, Whites scored higher than Blacks in reading (X^2=6.01, df=1, $p < .02$); math (X^2=11.50, df=1. $p < .001$); and English (X^2=8.18, df=1, $p < .01$). Whites had greater increments in English from eighth to twelfth grade (X^2=7.13, df=1, $p < .01$), but there were no differential increments in reading or math.

The significant IQ differences between races (X^2=12.03, df=1, $p < .001$) favored Whites and underlies the academic achievement differences. There were significant race differences on three of the ten scales of the Kuder Interest Inventory. Whites scored higher than Blacks on outdoor interests (X^2=6.54, df=1, $p < .02$); mechanical interests (X^2=4.99, df=1, $p < .05$); and clerical interests (X^2=4.99, df=1, $p < .05$). There were no race differences on the STS-EDS school interest scales or in number of extracurricular activities.

IQ differences. Within the truncated IQ range of 70 to 90, IQ scores were partitioned into two categories: Low (IQ=70-79) and High (IQ=80-90).

At the time of the study there were no significant IQ differences in the level of occupation of the students. After adjusting for female premarital occupational levels, it was found that High IQ students had significantly better jobs than Low IQ students (X^2=4.58, df=1, $p < .05$). Fathers of High IQ students had significantly better jobs than fathers of Low IQ students (X^2=4.17, df=1, $p < .05$). There were no significant differences between the High and Low IQ groups on the education levels of fathers and mothers.

On eighth grade achievement tests, no significant differences were found between High and Low IQ groups in reading, math, and language arts. On twelfth grade achievement tests, High IQ students performed better than Low IQ students on reading (X^2=5.82, df=1, $p < .02$) and English (X^2=20.31, df=1, $p < .001$). There were no IQ differences on the math test. From eighth to twelfth grade, there were no differential increments for High and Low IQ students in reading, math, and English. There were no differences between the High and Low IQ groups on the Kuder Interest Inventory, the STS-EDS school interest scales, and number of extracurricular activities.

Interactions of main variables. Descriptive data for 1969 Black females, White females, Black males, and White males are listed in Appendix G.

In order to assess possible level of occupation and achievement test differences attributable to sex, race, and IQ, analyses of variance were performed. Of major importance were any significant

interactions of the above three variables. Since the main effects of sex, race and IQ have been reported only significant interactions were indicated. The analysis of variance model used was a 2 x 2 x 2 factorial design with an unweighted means adjustment to compensate for unequal cell size. The power of the analyses was delimited by large variation in cell size and possible within cell score skewedness.

On actual level of occupation, a significant Sex x Race interaction was obtained ($F=6.47$; $df=1, 83$; $p < .05$). This interaction was accounted for by the higher rate of unemployment of females who married and discontinued working a few years after high school. Adjusting for this by using premarital occupational level for females, the Sex x Race interaction was not significant. There were no other significant interactions on the level of occupation analyses.

There were no significant interactions on the eighth grade or twelfth grade achievement test scores in reading, math, and English nor for increments in those scores from eighth to twelfth grade. The total lack of meaningful significant interactions seems to indicate that sex, race, and IQ influenced level of occupation and achievement test scores independently of each other.

Employment patterns. The above sections have already indicated certain trends in occupational success for the 1969 slow learner:

1. Slow learners can find gainful employment.
2. Considering female premarital occupational level, there are no sex differences in occupational level.
3. Parents of White slow learners have attained higher levels of education than parents of Black slow learners.
4. Fathers of White slow learners have better jobs than fathers of Black slow learners.
5. Considering female premarital occupational level, White slow learners reported having better jobs than Black slow learners.
6. Fathers of students in the IQ range 80-90 have better jobs than fathers of students in the IQ range 70-79.
7. Considering female premarital occupational level, students in the High IQ range have better jobs than students in the Low IQ range.
8. Considering female premarital occupational level, it might be inferred that sex, race, and IQ operate statistically independent of each other in predicting level of employment.

In order to examine any systematic variation between level of occupation and results of achievement test scores and the interest inventory, the level of occupation scale was partitioned into High level of occupation (1-5) and Low level of occupation (6-11). Level of occupation 1 corresponded to employment typically requiring a college education; level of occupation 11 indicated unemployment.

High achievement test scores in eighth and twelfth grade were not systematic predictors of attainment of better jobs. All slow learners had definite achievement increments from the eighth to the twelfth grade. The average increments were: reading=5.43 years, math=3.90 years, English=3.74 years.

Most scales of the Kuder Interest Inventory did not predict high versus low occupational levels. Significant differences indicating higher levels of interest for higher employment levels were found on the

Artistic scale ($\underline{X}^2$=4.56, df=1, p <.05) and the Clerical scale ($\underline{X}^2$=4.96, df=1, p <.05). The STS-EDS school interest scales did not predict high versus low levels of occupation.

1972 slow learner data

General descriptive data. Means and standard deviations of all variables statistically analyzed for the 1972 students are presented in Appendix B. Seventy-four percent of the students were actually employed within six months of high school graduation, i.e., at the time of this study. The average occupational level was in the lower fiftieth percentile of available level of occupation ratings, although the data indicates that students ranged from not working to enrollment in college.

The mean education level of the students' parents was less than a high school education ($\bar{X}$ Father=8.56 years; $\bar{X}$ Mother=9.12) although there was substantial variability in the educational attainment of the parents. The average occupational level for fathers was below that of skilled craftsman. As a group, mothers had a lower occupational level since many were housewives and could not be considered as gainfully employed.

School records indicated the availability of some educational facilities in all homes. The average number of extracurricular activities was 1.43. This seems to indicate that the 1972 slow learner did not become very involved in ancillary school experiences.

The eighth grade administration of the Kuder Interest Inventory yielded extremely variable and incomplete data. It will be shown later that the Kuder taken in the eighth grade provides little predictability of occupational level.

All 1972 students had been tested in Grade 8.7 on the STS-EDS. Appendix B indicates that the mean scores on all abilities, achievements and skills are approximately one year below grade level. The average coded future school plans score was three which indicated that the average educational ambition was to attend trade school, which correlated with the average career plans of skilled or semi-skilled labor. School interest scores indicated moderate interest in all school subjects albeit there was much variability in the scores.

During the second month of grade 10, the STS-EDS was again administered to all students. Appendix B indicates that the mean scores on all abilities, achievements, and skills was approximately one year below grade level. The mean coded school and career plans scores did not change significantly from grade 8.7. Moderate interest was expressed in all school subjects with most interest in vocational subjects and least interest in sciences and foreign languages.

In order to assess academic growth from grade 8.7 to grade 10.2, the eighth grade STS-EDS abilities, achievements, and skills scores were subtracted from the tenth grade scores. Note that only 1.5 years had elapsed between the two administrations. Appendix B indicated that the average increment across all subtests was approximately 1.5 years.

Those students actually employed did not indicate any great difficulties in finding a job. Those students not working indicated lack of available jobs and lack of training as major difficulties albeit some few students indicated that they really had not started to seek employment at the time of the study. Nineteen percent of the sample were attending further schooling and were rated in terms of their future occupational level.

Sex differences. There were significantly more females than males in the 1972 sample (X^2=4.55, df=1, $p < .05$). This was due to the low number of Black males that were successfully contacted for an interview.

Males indicated higher career aspirations than did females in the eighth grade (X^2=11.46, df=1, $p < .01$). This reflected the fact that in the eighth grade, males were interested in trades and skilled crafts while females preferred clerical and service occupations. This finding was reiterated in the tenth grade (X^2=23.56, df=1, $p < .001$). Even though career plans differed, there were no eighth or tenth grade sex differences in desire for further schooling after high school.

At the time of this study, a greater proportion of males were working or attending school than girls (X^2=13.83, df=1, $p < .001$). No significant sex differences were found in level of occupation for those people who were working.

In the eighth grade, males were superior to females in STS-EDS verbal ability (X^2=7.04, df=1, $p < .01$). There were no significant sex differences in non-verbal ability, reading, English, math, science, the U.S.A. (Social Studies), and solving everyday problems. In the tenth grade males were superior to females in STS-EDS non-verbal ability (X^2=3.84, df=1, p=.05) and math (X^2=5.44, df=1, $p < .02$). There were no significant sex differences in verbal ability, reading, English, science, the U.S.A., and solving everyday problems. There were no significant sex differences in gains on the STS-EDS from the eighth to the tenth grade.

While some academic differences were evident between sexes, there were no significant IQ differences between males and females. The Kuder Interest Inventory did not discriminate between the sexes nor did number of extracurricular activities. The eighth grade STS-EDS school interest scales indicated no sex differences. On the tenth grade STS-EDS school interest scale, females scored higher than males on English interests (X^2=9.05, df=1, $p < .01$); foreign language interest (X^2=5.42, df=1, $p < .02$); and vocational interests (X^2=5.13, df=1, $p < .05$).

Race differences. In the eighth grade, Blacks indicated higher educational aspirations than Whites (X^2=12.96, df=1, $p < .001$) although such a difference was not evident by the tenth grade. There were no eighth or tenth grade career aspiration differences between Blacks and Whites. Blacks and Whites did not differ in terms of actual additional schooling (trade school or college).

Significantly more Whites were working than Blacks (X^2=8.11, df=1, $p < .01$). Whites obtained higher occupational levels than Blacks (X^2=5.93, df=1, $p < .02$). Fathers of White students had higher occupational levels than fathers of Black students (X^2=21.82, df=1, $p < .001$). Parents of White students had obtained higher educational levels than parents of Black students (Father X^2=19.17, df=1, $p < .001$; Mother X^2=6.14, df=1, $p < .02$).

On eighth grade achievement tests, Whites surpassed Blacks in non-verbal ability (X^2= 4.29, df=1, $p < .05$); verbal ability (X^2= 16.08, df=1, $p < .001$); reading (X^2=30.03, df=1, $p < .001$); English (X^2=10.73, df=1, $p < .01$); math (X^2=26.57, df=1, $p < .001$); science (X^2=10.33, df=1, $p < .01$); the U.S.A. (X^2=6.12, df=1, $p < .02$; solving everyday problems (X^2=30.20, df=1, $p < .001$).

On the tenth grade achievement tests, Whites surpassed Blacks on non-verbal ability (X^2=8.88, df=1, $p < .01$); verbal ability (X^2=13.55, df=1, $p < .001$); reading (X^2=19.40, df=1, $p < .001$); English (X^2=15.50, df=1, $p < .001$); math (X^2=20.97, df=1, $p < .001$); science (X^2=21.75, df=1, $p < .001$); the U.S.A. (X^2=11.46, df=1, $p < .001$); solving everyday problems (X^2=14.89, df=1, $p < .001$).

Blacks had a greater increment than Whites from eighth to tenth grade in verbal ability (X^2=3.96, df=1, $p < .05$). There were no other differential increments on the STS-EDS.

There were no significant race differences in measured IQ, Kuder Interest Inventory sub-scales, or in number of extracurricular activities. On the eighth grade STS-EDS school interest scales, Blacks indicated more interests than Whites in music (X^2=4.59, df=1, $p < .05$); science (X^2=21.89, df=1, $p < .001$); social studies (X^2=17.77, df=1, $p < .05$); English (X^2=21.33, df=1, $p < .001$). On the tenth grade STS-EDS interest scales, Blacks indicated more interests than Whites in social studies (X^2=4.53, df=1, $p < .05$); English (X^2=15.67, df=1, $p < .001$); and foreign languages (X^2=10.20, df=1, $p < .01$).

IQ differences. Within the truncated IQ range of 70-90, IQ scores were partitioned into two categories: Low (IQ=70-79) and High (IQ=80-90).

A higher proportion of students in the High IQ group were employed (X^2=5.17, df=1, $p < .05$), although there were no significant level of occupation differences between the Low and High IQ groups (X^2=3.25, df=1, $.10 > p > .05$). Fathers of High IQ students had significantly better jobs than fathers of Low IQ students (X^2=11.57, df=1, $p < .001$). The same difference was found on mothers' occupations (X^2=6.07, df=1, $p < .02$). There was no significant difference between the High and Low IQ groups on the education level of the father. Mothers of High IQ students had attained higher levels of education than mothers of Low IQ students (X^2=7.59, df=1, $p < .01$).

On eighth grade achievement tests, High IQ students surpassed Low IQ students in non-verbal ability (X^2=11.43, df=1, $p < .001$); verbal ability (X^2=18.62, df=1, $p < .001$); reading (X^2=16.79, df=1, $p < .001$); English (X^2=12.14, df=1, $p < .001$); math (X^2=5.41, df=1, $p < .02$); science (X^2=14.66, df=1, $p < .001$); the U.S.A. (X^2=7.94, df=1, $p < .01$); solving everyday problems (X^2=18.98, df=1, $p < .001$).

On tenth grade achievement tests, High IQ students surpassed Low IQ students in non-verbal ability (X^2=6.24, df=1, $p < .02$); verbal ability (X^2=14.18, df=1, $p < .001$); reading (X^2=18.57, df=1, $p < .001$); English (X^2=18.81, df=1, $p < .001$); math (X^2=12.92, df=1, $p < .001$); science (X^2=5.37, df=1, $p < .05$); solving everyday problems (X^2=6.51, df=1, $p < .02$). There were no significant IQ differences on the U.S.A. sub test. From eighth grade to tenth grade, there were no differential increments for High and Low IQ students on any of the sub scales of the STS-EDS.

There were no differences between the High and Low IQ groups on the Kuder Interest Inventory scales or number of extracurricular activities. On the eighth grade STS-EDS school interest scales, Low IQ students indicated more interest in music than High IQ students (X^2=7.36, df=1, $p < .01$). No significant IQ differences were indicated on the STS-EDS tenth grade school interest scales.

Interactions of main variables. Descriptive data for Black females, White females, Black males, and White males are listed in Appendix H.

In order to assess possible level of occupation and achievement test differences attributable to interactions of sex, race, and IQ, a 2 x 2 x 2 factorial design analysis of variance with an unweighted means adjustment was used. Since the main effects of sex, race, and IQ have been reported, only significant interactions were indicated.

There were no significant interactions on the level of occupation analyses of variance. On the eighth grade achievement test, a significant Sex x IQ interaction was obtained on the verbal ability sub-test (F=5.95, df=1, 141, $p < .05$). This interaction was partially due to the variability in Low vs High IQ male scores. On the tenth grade achievement test, a significant Race x IQ interaction was obtained on the non-verbal ability sub test (F=9.39, df=1, 159, $p < .01$). This interaction was due in part to the greater variability in the Low vs High IQ Black scores. No other interactions were significant which tends to indicate the independent influence of race, sex, and IQ on job rank and achievement test scores.

Employment patterns. The above sections have already indicated certain trends in occupational success for 1972 slow learners.

1. Seventy-four percent of the students found gainful employment within six months of high school graduation although 19 percent of the students were pursuing additional education and were ranked according to their future occupational level.
2. Although there were no sex differences in level of occupation, a greater proportion of males were working or attending school than females.
3. Parents of White slow learners have attained higher levels of education than parents of Black slow learners.
4. Fathers of White slow learners have better jobs than fathers of Black slow learners.
5. More White slow learners were working than Black slow learners, and Whites had higher occupational levels.
6. Parents of students in the IQ range 80-90 have better jobs than parents of students in the IQ range 70-79.
7. A higher proportion of High IQ slow learners are working than Low IQ slow learners, although there were no IQ differences in occupational level.
8. It might be inferred that sex, race, and IQ are basically independent of each other in predicting occupational level.

Slow learners currently working had higher career aspirations in the eighth grade than nonworkers (X^2=5.85, df=1, $p < .02$), although by the tenth grade no difference was found. In the eighth grade current workers were less interested than nonworkers in science (X^2=4.02, df=1, $p < .05$), and English (X^2=5.26, df=1, $p < .05$). These differences were not evident on tenth grade school interest scales.

On the eighth grade STS-EDS achievement test, current workers scored higher than nonworkers on English (X^2=8.30, df=1, $p < .01$), and science (X^2=6.21, df=1, $p < .02$). On the tenth grade STS-EDS Achievement test, current workers were superior to unemployed slow learners on verbal ability (X^2=6.80, df=1, $p < .01$); reading (X^2=8.41, df=1, $p < .01$); and math (X^2=9.32, df=1, $p < .01$). From eighth grade to tenth grade, current workers increased more in math achievement than nonworkers (X^2=7.07, df=1, $p < .01$).

The level of occupation was partitioned into High level of occupation (1-5) and Low level of occupation (6-11) to facilitate analyses. Fathers of High level of occupation students had significantly better jobs than fathers of Low level of occupation students (X^2=9.84, df=1, $p < .01$).

On the eighth grade STS-EDS Achievement test, High level of occupation students scored higher than Low level of occupation students on English (X^2=6.90, df=1, $p < .01$). On the tenth grade STS-EDS, High level of occupation students achieved significantly higher scores on verbal ability (X^2=6.57, df=1, $p < .02$); reading (X^2=10.09, df=1, $p < .01$); math (X^2=6.52, df=1, $p < .02$); science (X^2=6.66, df=1, $p < .01$); and the U.S.A. (X^2=6.29, df=1, $p < .02$). Significantly higher increments from eighth to tenth grade were found for High level of occupation students in Reading (X^2=5.56, df=1, $p < .02$), and Math (X^2=13.35, df=1, $p < .001$).

The Kuder Interest Inventory and the eighth grade STS-EDS school interest scale did not predict High versus Low level of occupation. Low level of occupation students indicated higher interests in English than High level of occupation students on the tenth grade STS-EDS school interest scale (X^2=5.81, df=1, $p < .02$).

Chapter IV Discussion

The 1969 slow learner data provided information about employment conditions three years after high school graduation. The 1972 slow learner data described employment conditions immediately after high school graduation. Employment differences between the two sets of data must be in part related to the differential length of time since high school graduation and the intervening occupational experiences and aging of the individual.

It is evident that the 1969 slow learner high school graduate could obtain gainful employment. Only two of the 91 subjects sampled had never worked since high school graduation. At the time of this study, 67 per cent of the 1969 subjects were actually employed, but adjusting for the fact that some females chose to stop working when they married, 89 per cent of the 1969 subjects were considered employed at the time of this study. Seventy-four per cent of the 1972 subjects were currently employed or attending further schooling or training within six months after completing high school.

The mean level of occupation for the 1972 slow learners was comparable to the mean adjusted level of occupation for the 1969 slow learners. This indicated that after three years in the labor force, the overall level of occupation of the 1969 subjects had not increased as compared with the 1972 subjects' beginning level of occupation. Some 1969 and 1972 slow learners were found in professional and managerial positions; however, the trend toward lower occupational levels agrees with Benjamin (1968). To reiterate, the overall occupational level of the 1969 slow learner three years after completing high school was still low, and his earning power was limited.

Educational level of parents and occupational level of the father had definite bearings on the level of job success for both 1969 and 1972 subjects. Slow learners with higher educated parents and/or whose fathers had better jobs tended to obtain higher occupational status. Sociological environmental factors have been shown to have a definite contribution on the status of offspring in a technological society (Jencks, 1972). The above factors are probably contributing to Black-White differences in slow learner level of employment since Black parents in this study were found to have significantly lower levels of education than White parents and White fathers had better jobs than Black fathers.

Sex and race were determining factors in successful employment for both the 1969 and 1972 slow learner. During high school, females indicated a preference for traditional female careers in clerical and service occupations, while males aspired to skilled and semi-skilled trades. These aspirations could be realized by Whites more readily than by Blacks: Whites obtained higher occupational levels than Blacks. The order of obtained level of occuaption was White males, White females, Black females, and Black males. The order for the short term ability to obtain gainful employment by the 1972 subjects was: White males, 94% employed; Black males, 74% employed; White females, 70% employed; Black females, 57% employed.

It was found that within three years after high school, the 1969 White female slow learner tended to drop out of the work force when she married. Such a phenomenon was not as pronounced in the Black female sample. Whether or not she married, the Black female continued to work. Secretarial and sales clerk positions were more readily available for the White female as opposed to the Black female in the 1969 and 1972 samples.

Immediately after high school graduation, a higher proportion of males were employed than females. There were no sex differences in level of occupation for those who were able to find a job. This indicated that while more employment opportunities existed for the 1972 male slow learner immediately after graduation, his general occupational level was not any better than that of the employed slow learner females. After three years in the work force, the 1969 sample maintained this trend of no overall occupational level difference between sexes.

Academic achievement, vocational interests and school interests were not systematic predictors of employment success or level of occupation for the 1969 sample. For the 1972 sample, higher academic achievement test scores in eighth and tenth grade were indicative of success in finding a job and occupational level. This apparent contradiction may be explained by the fact that higher academic achievers could more readily compete for the limited jobs immediately available after high school graduation. The passage of time and the continued search for employment over a three year period has brought job success for the 1969 subjects independently of academic achievement differences.

1969 slow learners in the IQ range 80-90 had better jobs than students in the IQ range 70-79. In the 1972 sample, a higher proportion of slow learners in the IQ range 80-90 were working than students in the IQ range 70-79. High or low IQ did not contribute to differences in occupational level for the 1972 slow learners. This discrepancy in IQ as a predictor of occupational level from 1969 to 1972 may be explained by the fact that, as evidenced by the 1972 sample, the higher IQ slow learner is more able to obtain a job immediately after high school although only limited employment opportunities exist. On the other hand, with the passage of time, the higher IQ slow learner, as evidenced in the 1969 sample, was able to obtain somewhat higher occupational levels than the lower IQ slow learner.

There were unexplainable contradictory sex differences on achievement test scores between the 1969 and 1972 samples. In the 1969 sample, females were superior to males in reading, math, and English. In 1972, there were only three significant sex differences out of 24 possible comparisons on achievement tests; these differences favored males. While there were limited sex differences in academic achievement, both the 1969 and 1972 sample indicated pronounced race differences favoring Whites. This finding agrees with previous research (Miller and Dreger, 1972) and may underlie some of the job success differences between races. A potential employer making a choice (based on academic skills) between a White slow learner and a Black slow learner could justify his choice of a White. On a short term basis as mentioned above, (1972 sample), academic achievement contributed to employment success and occupational level. On a longer term basis, as evidenced by the 1969 sample, academic

achievement per se was not found to statistically discriminate job success or occupational level. Thus, in the long run, one could not use academic achievement differences to justify racial job discrimination in every case.

Level of IQ had some influence on the 1969 achievement test scores. The influence of IQ on achievement was extremely pronounced in the 1972 sample. This reiterates the well known fact that more intelligent students perform better in school. In both samples, three times as many students in IQ range 80-90 attempted further schooling or occupational training as compared with students in the IQ range 70-79. It might be inferred that with additional training and education, more employment options become available and higher IQ slow learners rise to better occupations than lower IQ slow learners.

While interest scales such as the Kuder Interest Inventory and the STS-EDS School Interest Scale may be beneficial within the educational realm as guides to curriculum planning, their discriminative predictability of post high school job success and level of occupation was virtually non-existent. The Kuder Interest Inventory was taken in the eighth grade by the 1969 and 1972 slow learners. Perhaps a twelfth grade administration of this or a similar instrument might yield data more indicative of a student's current career aspirations.

Many slow learner students did not choose to indicate to the interviewer any difficulties they may have had in obtaining employment. It is possible that slow learners who are currently working did not have any difficulties finding a job. It is also possible that some interviewees may not have wanted to divulge information which would reflect unfavorably upon themselves. The students were contacted by interviewers of the same race. It is noteworthy that less than five percent of Black students indicated racial prejudice as an impediment to obtaining employment. The two main difficulties mentioned by approximately 22 percent of all students were lack of available jobs and inadequate training. Only ten percent of the students indicated that their age was a barrier to seeking gainful employment. The students' lack of awareness of an age impediment is contrary to observations of previous researchers (Folk, 1968; Sheppard and Belitsky, 1966).

No specific trends were found in the 1969 sample relative to factors influencing whether or not an individual continued at a particular job or had several jobs in the three years since completing high school. Most working subjects in both samples indicated that they were satisfied with their jobs and that there were opportunities for advancement and salary increases. Some subjects may have refrained from stating information which they perceived as jeopardizing their employment security. In reality, as stated above, the overall occupational level of the slow learner was low and his earning power was limited relative to the population in general.

The majority of the subjects in this study were from the lower socioeconomic levels (lower class to lower-middle class) as indicated by the educational and occupational levels of their parents. During high school, all subjects indicated the presence of radios, televisions, newspapers, books, etc., in their homes. The reported socioeconomic levels were corroborated by the interviewers.

It was the initial intent of this study to include a comparison of slow learner dropouts from the classes of 1969 and 1972 with slow learners who completed high school. While some school records were available on dropouts, most records were incomplete. The lack of available contemporary addresses and phone numbers made it impossible to interview a representative sample of slow learner dropouts. The few dropout subjects for whom relatively complete data were recorded had obtained slightly lower levels of occupation than their high school graduate classmates. There was no evidence to indicate that the dropouts had attempted further education such as trade school or college and consequently their present and future occupational levels are more limited.

Chapter V Conclusion

The following conclusions may be made from this study:

1. Slow learners can obtain employment within three years after completing high school. Approximately 25 percent of slow learners have difficulty finding employment within six months after completing high school.

2. Overall occupational level and earning capacity are limited for slow learners, the majority of whom are below skilled craftsmen in occupational level.

3. Immediately after high school, males have an advantage in finding employment. The overall level of occupation for males and females is comparable immediately after high school and three years after high school graduation.

4. Immediately after high school, White slow learners, as compared to Black slow learners, have an advantage in finding employment. For both new graduates and those who have been out of high school three years, Whites have higher occupational levels than Blacks.

5. Immediately after high school, slow learners in the IQ range 80-90 and high scorers on achievement tests have an advantage in finding employment. Over a three year period, slow learners in the IQ range 80-90 were able to obtain a higher occupational level than slow learners in the IQ range 70-79.

6. Educational level of parents and occupational level of the father have definite bearings on the short term and long term employment success and occupational level of slow learner high school graduates.

7. Academic achievement, vocational interests and school interests are not long term predictors of employment success or level of occupation.

Chapter VI Recommendations

The following recommendations may be made from this study:

1. Educational systems should provide a post-high school counselor to apprise slow learner graduates of possible employment opportunities and further training program, and to encourage slow learners towards realistic employment decisions. In the present system, the slow learner high school graduate must basically rely on his own resources in seeking employment. The special counselor could help the slow learner make the transition from school to work or possible further training. Follow-up records could be maintained which may help in counseling other students.

2. Currently, Blacks, lower academic achievers, and students in the IQ range 70-79 have greatest difficulty in finding gainful employment. The recommended post-high school counselor should pay special attention to individuals in these categories. Furthermore, he should establish relationships with Chambers of Commerce and business leaders in order to implement a community re-education program to rectify job discrimination based on variables other than ability.

3. Slow learners make progress during high school in traditional academic subjects which are presently useful in obtaining employment. However, slow learners with additional training after high school obtain a higher level of occupation. Consequently, career education or work-study programs incorporated into the present high school curriculum may enable the slow learner to obtain a higher occupational level soon after high school graduation.

Bibliography

Benjamin, G. E. A study of job success of graduates of work-study programs for the average-above average student, the slow learner, and the educable mentally handicapped student in a central New York State city. Dissertation Abstracts, 1968, 29(6), 1815-A.

Crowley, R. F. Teaching the slow learner. Today's Education, 1969, 58, 48-49.

Dictionary of Occupational Titles. U.S. Department of Labor: U.S. Government Printing Office, 1965.

Edwards, T. D. Stimulating the slow learner. School and Community, 1961, 47, 8-9.

Folk, H. The Problems of Youth Unemployment. University of Illinois: Institute of Labor and Industrial Relations, 1968.

Greenholz, S. B. Reaching low achievers in high school mathematics. Today's Education, 1968, 49, 31-32.

Hammitt, H. Evaluating and re-teaching slow learners. Arithmetic Teacher, 1967, 14, 40-41.

Jencks, C., et al. Inequality; A Reassessment of the Effect of Family and Schooling in America. New York: Basic Books, 1972.

Leshner, S. S. and Snyderman, G. S. Job Seeking Patterns of Disadvantaged Youth. Dept. of Labor, Bureau of Employment Security, 1966.

Miller, K. S. and Drager, R. Comparative Studies of Blacks and Whites in the United States. New York: Seminar Press, 1973.

Perrella, V. and Bogen, F. Out of School Youth, February, 1963. Special Labor Report #46, November, 1964.

Pate, J. E. and Webb, W. W. Screening beginning first graders for potential problems. Exceptional Children, 1965, 32, 111.

Sheppard, H. L. and Belitsky, A. H. The Job Hunt. Baltimore: John Hopkins Press, 1966.

APPENDICES

Appendix A
Summary Data For
Slow Learners
1969

N= 91
Females 53 . Whites 48
Males 38 Blacks 43

Unadjusted Occupational Level		Adjusted Occupational Level	
$\bar{X}$	S.D.	$\bar{X}$	S.D.
7.37	3.47	6.40	3.12

			Unadjusted	Adjusted
N in Trade School or College	27	N Working	61	81
N Not in Trade School or College	64	N Not Working	30	10

IQ (Eighth Grade)

$\bar{X}$	S.D.
81.37	5.50

Extracurricular Activities

$\bar{X}$	S.D.
1.72	1.73

Education:

	$\bar{X}$	S.D.
Father	6.69	4.26
Mother	7.94	3.66

Occupational Level:

	$\bar{X}$	S.D.
Father	5.15	3.90
Mother	9.68	2.68

Achievement Scores

	SRA Grade 8.7		STS-EDS Grade 12.5		Difference	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Reading	5.76	1.49	11.43	1.88	5.43	1.54
Math	6.89	1.98	10.89	1.79	3.90	1.49
English	7.73	2.43	11.63	1.91	3.74	1.79

STS-EDS Motivations and Interest

	Grade 12.5	
	$\bar{X}$	S.D.
Career Plans	4.25	1.24
School Plans	3.12	1.24
Music	6.11	2.81
Art	5.44	2.67
Math	5.47	3.01
Science	4.16	2.63
Social Studies	4.89	3.10
English	5.23	2.90
Foreign Language	4.66	2.90
Vocational	7.40	2.61

Kuder Interest Inventory (Eighth Grade)

	$\bar{X}$	S.D.		$\bar{X}$	S.D.
Outdoor	32.52	25.28	Artistic	37.40	26.86
Mechanical	33.15	26.66	Literary	36.04	27.38
Computational	47.30	29.86	Musical	29.38	23.22
Scientific	42.69	27.79	Social Service	43.77	25.74
Persuasive	35.36	21.58	Clerical	47.90	27.59

APPENDIX B
Summary Data For Slow Learners 1972

N= 174

Females	98	Whites	101	N Working	129	Occupational Level	
Males	76	Blacks	73	N Not Working	45	$\bar{X}$	S.D.
						6.45	3.78

N in Trade School or College 33
N Not in Trade School or College 141

IQ (Eighth Grade)

$\bar{X}$	S.D.
81.32	7.56

Education:	$\bar{X}$	S.D.	Occupational Level:	$\bar{X}$	S.D.	Extracurricular Activities	$\bar{X}$	S.D.
Father	8.56	4.12	Father	5.40	3.32		1.43	1.60
Mother	9.12	3.04	Mother	9.67	2.44			

STS-EDS Abilities, Achievement and Skills

	Grade 8.7		Grade 10.2		Difference	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Non Verbal	7.59	.80	9.45	.55	1.88	.64
Verbal	7.56	.57	8.77	.50	1.22	.50
Reading	7.69	.57	9.30	.74	1.65	.57
English	8.15	.68	9.54	.62	1.38	.50
Math	7.58	.52	8.90	.66	1.30	.52
Science	7.77	.79	9.21	.74	1.52	.68
The U.S.A. (Social Studies)	7.63	.80	9.12	.60	1.51	.68
Solving Everyday Problems	7.42	.87	9.12	.78	1.72	.66

STS-EDS Motivations and Interest

	Grade 8.7		Grade 10.2	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Career Plans	3.77	1.38	3.86	1.37
School Plans	3.68	1.35	3.51	1.21
Music	6.60	2.79	6.81	2.54
Art	6.23	2.94	5.99	2.39
Math	5.81	2.80	5.54	2.70
Science	6.16	2.74	5.19	2.78
Social Studies	5.70	2.96	5.45	2.80
English	6.59	2.50	6.42	2.68
Foreign Language	5.72	2.96	5.01	2.74
Vocational	7.23	2.61	7.61	2.11

Kuder Interest Inventory (Eighth Grade)

	$\bar{X}$	S.D.		$\bar{X}$	S.D.
Outdoor	34.75	29.86	Artistic	42.71	23.95
Mechanical	43.56	28.18	Literary	41.09	25.59
Computational	49.54	27.54	Musical	47.05	27.60
Scientific	41.09	26.10	Social Service	47.92	24.24
Persuasive	59.84	23.17	Clerical	50.21	25.55

APPENDIX C

RATING OF STS-EDS CAREER PLANS

Rating	Choice
1	Arts
1	Sciences
2	Business
3	Factory
3	Construction
3	Mining
3	Trade
3	Sports
4	Stores
4	Sales
4	Shop
5	Social Service
5	Personnel Service
5	Office
5	Government
6	Farming

APPENDIX D

RATING OF STS-EDS EDUCATIONAL PLANS

Rating	Choice
1	Quit School
2	High School
3	Trade School
4	Junior College
5	College
6	College Plus

APPENDIX E
EMPLOYMENT PATTERN SURVEY

Pre Survey Information

1) explain nature of study 2) stress confidentiality of results 3) tell respondent you appreciate his cooperation and that he is not forced to answer anything he does not want to

Name:_____ Address:_____Subject Code No. _____

Race:_____ Sex:_____Class:_____Age:_____

I. JOB INFORMATION

1. Are you working now? a) part time____ b) full time ____ c) no____
2. a) Steady b) Temporary
3. What do you do?
4. How long have you been working at this job? Years___Months___
5. What previous jobs have you had? How long did you stay on each job?
6. What difficulties have you met in finding a job?
   a) lack of training? b) lack of high school education?
   c) age? d) sex? e) race? f) draft status? g) other
7. Did you have to take a test as part of your application for a job?
   a) What kind of test?
   b) What were the results of the test?
8. Are you happy with your present job? Yes____ No____
9. Can you get a promotion in your present job? Yes___ No____

II. SUBJECT INFORMATION

1. Was the subject willing to cooperate? Yes____ No____
2. How many children do you have? 0 1 2 3 4 5 more
3. Does your father/mother work? Father Yes__No__Mother Yes__No__
   a) What kind of work
4. Are you going to any special school or training for a specific job?
5. How much schooling did your parents have? Father___Mother___
6. Are you now going or have you ever been to trade school?

III. INVESTIGATION IMPRESSIONS

1. Was the subject willing to cooperate? Yes____No____
2. What was the general type and condition of the dwelling?
3. Was the subject dressed in accordance with acceptable standards for his sub culture? Above__Equal__Below__
4. Presence of educational material?
   a) TV, radio
   b) books
   c) newspapers and magazines

APPENDIX F

OCCUPATIONAL LEVEL RATING SCALE

Rating	Occupation
1	Teacher, Engineer, Chiropractor, Registered Nurse, College Student
2	Insurance salesman, Bank Clerk, Small Business Manager
3	Skilled Craftsman, Trade School Student
4	Secretary, Bookkeeper, Receptionist, Practical Nurse, Beautician
5	Sales Clerk
6	Farmer, Nursery Man, Service Station Attendant, Phone Operator
7	Small Truck Driver, Bus Driver, Crew Boat Captain
8	Food Processor, Cook, Baker
9	Armed Forces (Enlisted Man), Sheriff's Deputy
10	Common Laborer, Maid, Janitor, Porter
11	Unemployed

APPENDIX G

1969 RACE-SEX SUMMARY DATA

TABLE 1
Summary Data For
Slow Learners
1969 Black Females

N= 25

Females	25	Whites	0
Males	0	Blacks	25

Unadjusted Occupational Level		Adjusted Occupational Level	
$\bar{X}$	S.D.	$\bar{X}$	S.D.
7.48	3.64	7.03	3.53

		Unadjusted	Adjusted
N in Trade School or College	6	N Working	19	22
N Not in Trade School or College	19	N Not Working	6	3

IQ (Eighth Grade)

$\bar{X}$	S.D.
77.88	4.95

Extracurricular Activities

$\bar{X}$	S.D.
1.64	1.55

Education:

	$\bar{X}$	S.D.
Father	5.48	3.22
Mother	6.44	3.11

Occupational Level:

	$\bar{X}$	S.D.
Father	7.48	3.51
Mother	9.88	2.22

Achievement Scores

	SRA Grade 8.7		STS-EDS Grade 12.5		Difference	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Reading	5.29	1.96	11.72	.74	5.44	1.98
Math	6.13	2.27	10.84	.78	3.77	1.53
English	7.17	2.86	11.80	.67	3.99	1.92

STS-EDS Motivations and Interest

	Grade 12.5 $\bar{X}$	S.D.
Career Plans	4.64	.76
School Plans	3.84	1.72
Music	6.16	2.98
Art	4.52	2.63
Math	4.92	3.05
Science	3.92	2.29
Social Studies	5.20	3.24
English	6.28	2.98
Foreign Language	6.04	2.84
Vocational	7.56	2.22

Kuder Interest Inventory (Eighth Grade)

	$\bar{X}$	S.D.		$\bar{X}$	S.D.
Outdoor	28.80	22.47	Artistic	29.00	20.82
Mechanical	31.40	28.67	Literary	37.20	28.51
Computational	46.40	32.32	Musical	29.20	23.44
Scientific	44.00	26.93	Social Service	44.60	21.70
Persuasive	30.60	20.58	Clerical	40.40	28.06

TABLE 2

Summary Data For
Slow Learners
1969 White Females

N= 28

Females	28	Whites	28
Males	0	Blacks	0

Unadjusted Occupational Level		Adjusted Occupational Level	
$\bar{X}$	S.D.	$\bar{X}$	S.D.
9.07	2.98	6.35	2.79

N in Trade School or College	8
N Not in Trade School or College	20

	Unadjusted	Adjusted
N Working	10	22
N Not Working	18	6

IQ (Eighth Grade)

$\bar{X}$	S.D.
84.61	3.77

Extracurricular Activities

$\bar{X}$	S.D.
2.07	1.48

Education:

	$\bar{X}$	S.D.
Father	8.18	4.61
Mother	9.64	3.46

Occupational Level:

	$\bar{X}$	S.D.
Father	4.14	3.67
Mother	8.78	3.46

Achievement Scores

	SRA Grade 8.7		STS-EDS Grade 12.5		Difference	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Reading	6.07	1.60	11.21	3.23	5.34	1.90
Math	7.52	2.23	10.55	3.02	3.22	1.64
English	8.81	2.61	11.50	3.32	2.91	1.81

STS-EDS Motivations and Interest

	Grade 12.5	
	$\bar{X}$	S.D.
Career Plans	4.36	1.45
School Plans	3.62	1.31
Music	5.82	2.86
Art	5.14	2.58
Math	5.64	3.07
Science	3.86	2.98
Social Studies	4.50	3.23
English	5.29	3.03
Foreign Language	4.39	2.92
Vocational	7.75	2.77

Kuder Interest Inventory (Eighth Grade)

	$\bar{X}$	S.D.		$\bar{X}$	S.D.
Outdoor	32.75	29.11	Artistic	38.57	29.53
Mechanical	34.53	30.59	Literary	29.64	23.33
Computational	44.82	29.95	Musical	23.96	19.69
Scientific	46.07	28.09	Social Service	36.61	25.68
Persuasive	36.79	23.54	Clerical	49.11	28.71

TABLE 3
Summary Data For
Slow Learners
1969 Black Males

N= 18
Females 0 Whites 0
Males 18 Blacks 18

Unadjusted Occupational Level		Adjusted Occupational Level	
$\bar{X}$	S.D.	$\bar{X}$	S.D.
7.44	3.05	7.33	2.85

		Unadjusted	Adjusted
N in Trade School or College	5	N Working	13	15
N Not in Trade School or College	13	N Not Working	5	3

IQ (Eighth Grade)

$\bar{X}$	S.D.
80.17	4.92

Extracurricular Activities

$\bar{X}$	S.D.
1.00	1.13

Education:

	$\bar{X}$	S.D.
Father	4.17	2.98
Mother	6.11	3.41

Occupational Level:

	$\bar{X}$	S.D.
Father	4.00	4.31
Mother	10.17	2.41

Achievement Scores

	SRA Grade 8.7		STS-EDS Grade 12.5		Difference	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Reading	5.51	.89	11.15	.76	5.54	.68
Math	6.49	1.05	10.79	.76	4.47	1.12
English	6.65	1.58	11.47	.63	4.71	1.47

STS-EDS Motivations and Interest

	Grade 12.5	
	$\bar{X}$	S.D.
Career Plans	4.00	1.41
School Plans	3.61	1.61
Music	7.50	2.20
Art	6.78	2.37
Math	6.33	2.95
Science	4.56	2.59
Social Studies	4.78	3.22
English	5.39	2.48
Foreign Language	4.50	2.79
Vocational	5.89	2.93

Kuder Interest Inventory (Eighth Grade)

	$\bar{X}$	S.D.		$\bar{X}$	S.D.
Outdoor	23.61	11.61	Artistic	41.28	26.41
Mechanical	26.11	13.23	Literary	48.61	26.67
Computational	54.67	28.35	Musical	45.17	25.57
Scientific	31.39	22.61	Social Service	52.78	25.04
Persuasive	37.11	16.02	Clerical	51.61	19.18

TABLE 4
Summary Data For
Slow Learners
1969 White Males

N= 20
Females 0 Whites 20
Males 20 Blacks 0

	Unadjusted Occupational Level		Adjusted Occupational Level	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.
	4.80	2.82	4.80	2.82

		Unadjusted	Adjusted
N in Trade School or College	8	N Working	19	20
N Not in Trade School or College	12	N Not Working	1	0

IQ (Eighth Grade)

$\bar{X}$	S.D.
82.30	5.49

Extracurricular Activities

$\bar{X}$	S.D.
2.00	2.47

Education:

	$\bar{X}$	S.D.
Father	8.40	4.51
Mother	9.10	3.48

Occupational Level:

	$\bar{X}$	S.D.
Father	4.70	3.26
Mother	10.25	1.94

Achievement Scores

	SRA Grade 8.7		STS-EDS Grade 12.5		Difference	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Reading	6.14	.82	11.64	.59	5.44	.80
Math	7.30	1.52	11.50	.64	4.50	1.14
English	7.88	1.57	11.74	.60	3.70	1.39

STS-EDS Motivations and Interest

	Grade 12.5	
	$\bar{X}$	S.D.
Career Plans	3.85	1.18
School Plans	3.76	1.11
Music	5.20	2.71
Art	5.80	2.75
Math	5.15	2.96
Science	4.55	2.64
Social Studies	5.15	2.77
English	3.70	2.47
Foreign Language	3.45	2.50
Vocational	8.02	2.14

Kuder Interest Inventory (Eighth Grade)

	$\bar{X}$	S.D.		$\bar{X}$	S.D.
Outdoor	44.85	30.93	Artistic	42.75	29.44
Mechanical	39.75	27.22	Literary	32.25	29.80
Computational	45.25	29.04	Musical	23.00	20.03
Scientific	46.50	31.75	Social Service	44.65	29.87
Persuasive	37.75	24.73	Clerical	52.25	31.64

APPENDIX H

1972 RACE-SEX SUMMARY DATA

TABLE 1
Summary Data For
Slow Learners
1972 Black Females

N=48

Females	48	Whites	0	N Working	27	Occupational Level
Males	0	Blacks	48	N Not Working	21	$\bar{X}$ S.D.
						7.27 4.02

N in Trade School or College 8
N Not in Trade School or College 40

IQ (Eighth Grade)

$\bar{X}$	S.D.
81.29	5.96

Education:	$\bar{X}$	S.D.	Occupational Level:	$\bar{X}$	S.D.	Extracurricular Activitie	$\bar{X}$	S.D.
Father	6.95	3.61	Father	7.02	3.30		1.33	1.60
Mother	8.57	2.80	Mother	10.10	1.42			

STS-EDS Abilities, Achievement and Skills

	Grade 8.7		Grade 10.2		Difference	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Non Verbal	7.28	.75	9.17	.55	1.92	.66
Verbal	7.24	.46	8.56	.45	1.32	.50
Reading	7.30	.35	9.01	.69	1.71	.59
English	7.92	.62	9.40	.58	1.43	.42
Math	7.25	.41	8.54	.55	1.23	.47
Science	7.40	.70	8.88	.64	1.53	.65
The U.S.A. (Social Studies)	7.35	.63	8.91	.44	1.56	.66
Solving Everyday Problems	7.03	.60	8.81	.60	1.68	.70

STS-EDS Motivations and Interest

	Grade 8.7		Grade 10.2	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Career Plans	4.27	1.47	4.21	1.41
School Plans	4.38	1.19	3.80	1.06
Music	6.83	2.62	7.04	2.59
Art	6.73	3.11	6.38	2.08
Math	5.95	3.07	5.83	2.77
Science	7.38	2.33	5.16	2.79
Social Studies	6.46	2.96	6.13	2.55
English	7.68	2.02	7.64	1.83
Foreign Language	6.07	3.16	6.08	2.67
Vocational	7.73	2.32	8.00	1.52

Kuder Interest Inventory (Eighth Grade)

	$\bar{X}$	S.D.		$\bar{X}$	S.D.
Outdoor	26.32	21.97	Artistic	40.79	16.27
Mechanical	46.31	29.90	Literary	45.79	21.16
Computational	56.58	28.04	Musical	46.58	26.98
Scientific	43.47	27.35	Social Service	42.65	19.93
Persuasive	55.83	24.45	Clerical	47.37	24.74

TABLE 2
Summary Data For
Slow Learners
1972 White Females

N= 50

Females	50	Whites	50	N Working	35
Males	0	Blacks	0	N Not Working	15

Occupational Level	
$\bar{X}$	S.D.
6.56	3.92

N in Trade School or College 11
N Not in Trade School or College 39

IQ (Eighth Grade)

$\bar{X}$	S.D.
81.98	5.51

Education:	$\bar{X}$	S.D.
Father	9.15	4.14
Mother	9.62	3.21

Occupational Level:	$\bar{X}$	S.D.
Father	5.06	3.32
Mother	9.80	2.27

Extracurricular Activities	
$\bar{X}$	S.D.
1.44	1.57

STS-EDS Abilities, Achievement and Skills

	Grade 8.7		Grade 10.2		Difference	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Non Verbal	7.75	.71	9.53	.45	1.78	.61
Verbal	7.70	.45	8.83	.37	1.17	.48
Reading	7.96	.51	9.61	.54	1.65	.50
English	8.48	.61	9.90	.52	1.40	.46
Math	7.77	.52	9.06	.51	1.33	.47
Science	7.85	.69	9.52	.57	1.74	.68
The U.S.A. (Social Studies)	7.86	.79	9.19	.53	1.40	.67
Solving Everyday Problems	7.80	.80	9.48	.72	1.68	.57

STS-EDS Motivations and Interest

	Grade 8.7		Grade 10.2	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Career Plans	3.96	1.43	4.17	1.39
School Plans	3.18	1.28	3.33	1.17
Music	6.93	2.47	7.20	2.35
Art	5.91	3.04	5.83	2.74
Math	5.66	2.71	5.28	2.69
Science	5.16	2.98	5.26	2.79
Social Studies	5.00	3.01	4.96	2.99
English	6 49	2.21	6.56	2.64
Foreign Language	6.24	2.75	5.30	2.73
Vocational	7.00	2.76	7.91	1.96

Kuder Interest Inventory (Eighth Grade)

	$\bar{X}$	S.D.		$\bar{X}$	S.D.
Outdoor	27.28	27.55	Artistic	40.97	25.46
Mechanical	47.97	26.87	Literary	44.39	28.28
Computational	48.58	27.27	Musical	42.11	28.53
Scientific	43.14	26.52	Social Service	48.06	25.47
Persuasive	59.17	25.42	Clerical	55.63	25.68

TABLE 3
Summary Data For
Slow Learners
1972 Black Males

N= 25

Females 0	Whites 0	N Working	19	Occupational Level	
Males 25	Blacks 25	N Not Working	6	$\bar{X}$	S.D.
				7.52	3.54

N in Trade School or College	4
N Not in Trade School or College	21

IQ (Eighth Grade)

$\bar{X}$	S.D.
79.96	5.93

Education:	$\bar{X}$	S.D.	Occupational Level:	$\bar{X}$	S.D.	Extracurricular Activitie $\bar{X}$	S.D.
Father	5.73	3.53	Father	7.28	3.09	1.36	1.38
Mother	7.91	3.05	Mother	9.88	2.42		

STS-EDS Abilities, Achievement and Skills

	Grade 8.7		Grade 10.2		Difference	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Non Verbal	7.63	.80	9.38	.60	1.77	.63
Verbal	7.37	.76	8.79	.58	1.30	.60
Reading	7.44	.67	8.89	.78	1.57	.67
English	7.78	.80	9.05	.48	1.21	.65
Math	7.39	.50	8.62	.68	1.22	.59
Science	7.52	.96	8.86	.64	1.49	.68
The U.S.A. (Social Studies)	7.29	.76	8.86	.52	1.62	.72
Solving Everyday Problems	6.85	.84	8.64	.72	1.93	.55

STS-EDS Motivations and Interest

	Grade 8.7		Grade 10.2	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Career Plans	3.42	.77	3.36	1.25
School Plans	3.89	1.41	3.88	1.39
Music	7.74	2.40	7.20	2.52
Art	6.79	2.51	6.21	2.17
Math	6.84	2.43	6.62	2.48
Science	7.00	2.52	6.08	2.76
Social Studies	7.36	2.00	6.39	2.33
English	7.84	1.92	6.91	2.76
Foreign Language	6.21	3.01	5.29	2.61
Vocational	7.61	2.57	6.88	2.72

Kuder Interest Inventory (Eighth Grade)

	$\bar{X}$	S.D.		$\bar{X}$	S.D.
Outdoor	24.33	22.46	Artistic	50.83	28.0
Mechanical	28.33	19.66	Literary	33.33	23.59
Computational	48.33	25.43	Musical	58.17	24.50
Scientific	51.0	20.12	Social Service	56.67	24.22
Persuasive	60.0	17.89	Clerical	43.33	12.11

TABLE 4
Summary Data For
Slow Learners
1972 White Males

N= 51

Females	0	Whites	51	N Working	48
Males	51	Blacks	0	N Not Working	3

Occupational Level	
$\bar{X}$	S.D.
5.04	3.17

N in Trade School or College 10
N Not in Trade School or College 41

IQ (Eighth Grade)	
$\bar{X}$	S.D.
81.35	10.77

Education:			Occupational Level:			Extracurricular Activitie	
	$\bar{X}$	S.D.		$\bar{X}$	S.D.	$\bar{X}$	S.D.
Father	9.62	3.55	Father	3.25	1.85	1.53	1.77
Mother	9.58	2.93	Mother	9.02	3.21		

STS-EDS Abilities, Achievement and Skills

	Grade 8.7		Grade 10.2		Difference	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Non Verbal	7.70	.88	9.69	.50	1.97	.65
Verbal	7.82	.53	8.99	.51	1.14	.47
Reading	7.88	.54	9.51	.74	1.63	.58
English	8.20	.62	9.59	.63	1.40	.52
Math	7.78	.45	9.23	.68	1.39	.58
Science	8.14	.71	9.41	.81	1.28	.66
The U.S.A. (Social Studies)	7.80	.85	9.38	.73	1.53	.71
Solving Everyday Problems	7.67	.90	9.32	.82	1.68	.77

STS-EDS Motivations and Interest

	Grade 8.7		Grade 10.2	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Career Plans	3.27	1.28	3.46	1.21
School Plans	3.54	1.30	3.22	1.21
Music	5.53	3.14	6.02	2.56
Art	5.84	2.84	5.65	2.42
Math	5.3	2.74	4.98	2.63
Science	5.70	2.45	4.71	2.76
Social Studies	4.98	2.89	4.83	2.87
English	5.12	2.67	4.81	2.68
Foreign Language	4.64	2.75	3.54	2.31
Vocational	6.84	2.72	7.32	2.32

Kuder Interest Inventory (Eighth Grade)

	$\bar{X}$	S.D.		$\bar{X}$	S.D.
Outdoor	47.36	32.55	Artistic	44.00	25.53
Mechanical	40.59	29.34	Literary	36.95	25.21
Computational	47.11	28.35	Musical	50.13	27.54
Scientific	36.82	25.98	Social Service	48.74	25.15
Persuasive	62.34	21.54	Clerical	47.79	27.21